

Claims

What is claimed is:

1. A method of evaluating a compound for the ability to regulate the interaction of a first test protein linked to a DNA binding moiety and a second test protein linked to a transcriptional activation moiety, comprising contacting said compound with said first test protein linked to a DNA binding moiety or second test protein linked to a transcriptional activation moiety and determining the ability of said compound to regulate the interaction of said first test protein linked to a DNA binding moiety with said second test protein covalently linked to a transcriptional activation moiety, wherein said regulation enhances or inhibits the expression of a detectable protein.
2. The method of claim 1, wherein the DNA binding moiety and the transcriptional activation moiety are derived from a single transcriptional activator.
3. The method of claim 1, wherein the DNA binding moiety and the transcriptional activation moiety are derived from different proteins.
4. The method of claim 1, wherein said detectable protein is selected from the group consisting of beta-galactosidase, green fluorescent protein, luciferase, alkaline phosphatase and chloramphenical acetyl transferase
5. The method of claim 1, wherein the compound is a protein.
6. The method of claim 5, wherein the protein is encoded by a polynucleotide.
7. The method of claim 6, wherein the polynucleotide is contained in an expression vector in operable linkage.

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8. The method of claim 1, wherein the compound is a bioactive molecule.
9. The method of claim 8, wherein the bioactive molecule is a polyketide.
10. The method of claim 9, wherein the polyketide is a product of an enzymatic process encoded by an operon, or portions thereof.
11. The method of claim 10, wherein the operon, or portions thereof, is contained in an expression vector in operable linkage.
12. The method of claim 10, wherein the operon, or portions thereof, is derived from uncultivated microorganisms.
13. The method of claim 12, wherein the uncultivated microorganisms comprise a mixture of terrestrial microorganisms, a mixture of marine microorganisms, or a mixture of terrestrial microorganisms and marine microorganisms.
14. The method of claim 12, wherein the uncultivated microorganisms are extremophiles.
15. The method of claim 14, wherein the extremophiles are selected from the group consisting of thermophiles, hyperthermophiles, psychrophiles, and psychrotrophs.

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